Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

# ENVIRONMENTAL ASSESSMENT
**For Routine Actions with Limited Environmental Impact**

## Part I. Proposed Action Description

1. Applicant/Contact name and address: IAP Worldwide Services, Inc.
PO Box 1513
Sidney, MT 59270

2. Type of action: Application for Beneficial Water Use Permit No. 42M 30068052

3. Water source name: Groundwater

4. Location affected by project: NENE Section 8, T22N, R58E, Richland County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The proposed project is a 732 bed housing development designed to fulfill the need for housing associated with oil and gas development in eastern Montana and western North Dakota. The POD and POU are located in the NENE Section 8, T22N, R58E, Richland County. The Applicant proposes to divert groundwater year-round at a maximum rate of 142.8 GPM up to 66.9 AF annually to be used as a public water supply for the housing development.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

- US Fish & Wildlife Service
- Montana Natural Heritage Program
- Montana Department of Fish, Wildlife, & Parks
- Montana Department of Environmental Quality
- USDA Web Soil Survey
- National Wetlands Inventory

## Part II. Environmental Review

**1. Environmental Impact Checklist:**

## PHYSICAL ENVIRONMENT

**WATER QUANTITY, QUALITY AND DISTRIBUTION**

***Water quantity*** *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

*Determination*: Issuance of this permit is unlikely to have any significant impact on water quantity.

Surface depletions from pumping the Applicant's wells could manifest in the North Fork Fox Creek, Youngs Coulee, and Spring Coulee, all of which are non-perennial in nature. No data regarding chronic or periodic dewatering was found on the Montana Department of Fish, Wildlife, & Parks website for these three surface sources.

The reach of the Yellowstone River in which surface depletions could occur is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife, & Parks (DFWP). The DFWP has a water reservation on this portion of the Yellowstone River to maintain instream flows that varies depending on the time of year. The following table provides the instream flows by month.

| **Section:** N.D. BORDER to TONGUE R<br>**Type:** Water Reservation Granted<br>**River Miles:** 15.3 to 183 | | | |
|---|---|---|---|
| Begin Date | End Date | Flow (CFS) | Priority Date |
| 1-Jan | 31-Jan | 3738 | 12/15/1978 |
| 1-Feb | 31-Feb | 4327 | 12/15/1978 |
| 1-Mar | 31-Mar | 6778 | 12/15/1978 |
| 1-Apr | 31-Apr | 6808 | 12/15/1978 |
| 1-May | 31-May | 11964 | 12/15/1978 |
| 1-Jun | 31-Jun | 25140 | 12/15/1978 |
| 1-Jul | 31-Jul | 10526 | 12/15/1978 |
| 1-Aug | 31-Aug | 2670 | 12/15/1978 |
| 1-Sep | 31-Sep | 3276 | 12/15/1978 |
| 1-Oct | 31-Oct | 6008 | 12/15/1978 |
| 1-Nov | 31-Nov | 5848 | 12/15/1978 |
| 1-Dec | 31-Dec | 3998 | 12/15/1978 |

***Water quality*** *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

*Determination:* Issuance of this permit is unlikely to have any significant impact on water quality.

Water quality of Spring Coulee and Youngs Coulee has not been defined as assessment unit and is not listed at all by the DEQ.

The North Fork Fox Creek is listed on the TMDL 303(d) list as not supporting drinking water, primary contact recreation, aquatic life, or agriculture. Probable sources for the impairment to the North Fork Fox Creek include natural sources, irrigated crop production, channelization, and unknown sources.

The Yellowstone River is listed on the TMDL 303(d) list as partially supporting aquatic life. The impairment to aquatic life is likely due to a combination of factors that include bank vegetation alteration, hydrostructure flow modification, and heavy metals.

***Groundwater*** *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

*Determination*: Issuance of this permit is unlikely to have any significant impact on groundwater quality or supply.

Modeling analysis by DNRC hydrologists shows that there is groundwater physically and legally available for appropriation at the point of diversion requested by the Applicant. The groundwater aquifer indicated in this application has been shown to be hydraulically connected to the North Fork Fox Creek, Spring Coulee, and Youngs Coulee. It has been determined by DNRC hydrologists that there will be equally proportioned depletions of 13.8 GPM occurring to each of the identified surface sources when there is surface flow to deplete. The following table is a summary of the monthly net depletions that may occur on each of these three sources.

| Month | Consumption (AF) | Depletion (AF) | Depletion (GPM) |
|---|---|---|---|
| January | 1.85 | 1.85 | 13.8 |
| February | 1.85 | 1.85 | 13.8 |
| March | 1.85 | 1.85 | 13.8 |
| April | 1.85 | 1.85 | 13.8 |
| May | 1.85 | 1.85 | 13.8 |
| June | 1.85 | 1.85 | 13.8 |
| July | 1.85 | 1.85 | 13.8 |
| August | 1.85 | 1.85 | 13.8 |
| September | 1.85 | 1.85 | 13.8 |
| October | 1.85 | 1.85 | 13.8 |
| November | 1.85 | 1.85 | 13.8 |
| December | 1.85 | 1.85 | 13.8 |
| ***Total*** | ***22.2*** | ***22.2*** | |

Due to the non-perennial nature of these sources, it is possible that there will be no surface flow to deplete, in which case surface depletions will manifest in the Yellowstone River. Since periods of no flow on the non-perennial sources cannot be easily determined, the Department's analysis accounts for the total depletion occurring in the Yellowstone River. The following table is a summary of monthly net depletions that may occur in the Yellowstone River.

| Month | Consumption (AF) | Depletion (AF) | Depletion (GPM) |
|---|---|---|---|
| January | 5.575 | 5.575 | 41.5 |
| February | 5.575 | 5.575 | 41.5 |
| March | 5.575 | 5.575 | 41.5 |
| April | 5.575 | 5.575 | 41.5 |
| May | 5.575 | 5.575 | 41.5 |
| June | 5.575 | 5.575 | 41.5 |
| July | 5.575 | 5.575 | 41.5 |
| August | 5.575 | 5.575 | 41.5 |
| September | 5.575 | 5.575 | 41.5 |
| October | 5.575 | 5.575 | 41.5 |
| November | 5.575 | 5.575 | 41.5 |
| December | 5.575 | 5.575 | 41.5 |
| ***Total*** | ***66.9*** | ***66.9*** | |

**DIVERSION WORKS** - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

*Determination*: The proposed diversion is a groundwater diversion and should have no significant impact on stream channels, flow modifications, barriers, riparian areas, dams, or well construction.

**UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

***Endangered and threatened species*** - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

*Determination*: Issuance of this permit is unlikely to have any significant impact to any threatened or endangered fish, wildlife, plants, or aquatic species, or any species of special concern. It is also unlikely that issuance of this permit would create a barrier to the migration or movement of fish or wildlife.

Thirteen animal species were listed as species of concern within the area affected by the project.

| | | |
|---|---|---|
| Hoary Bat | Whooping Crane | Sauger |
| Blue Sucker | Iowa Darter | Shortnose Gar |
| Sturgeon Chub | Sicklefin Chub | Paddlefish |
| Brimstone Clubtail | Two sand-dwelling Mayflies | Spiny Softshell |

Of this list, two animals (whooping crane, pallid sturgeon) are listed as "endangered" by the US Fish & Wildlife Service. The whooping crane is known to migrate through eastern Montana, but there has been no evidence of breeding in Montana.

The pallid sturgeon is known to occur in the Yellowstone River. As any surface water diversion from the Yellowstone River will occur as prestream capture, it is unlikely that there would be any impact to the pallid sturgeon.

Two plant species of concern (Nine-anther prairie clover, Pale-spiked lobelia) have been identified to potentially be in the project area. According to the Montana Natural Heritage Program, there have been a few poorly documented occurrences of Nine-anther prairie clover in the eastern half of the state. Additional surveys and updated population data are needed. The Pale-spiked Lobelia is identified as rare and peripheral in Montana where it is known from a few locations in the northeast corner of the state. Additional data on population levels and trends are needed. It is unclear if any of the documented occurrences are subject to negative impacts or disturbances. Both of these species are listed as common, widespread, and abundant; not vulnerable in most of their range.

***Wetlands*** **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

*Determination*: There are no wetlands identified within the project area.

***Ponds*** **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

*Determination*: There are no ponds identified within the project area.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

*Determination*: Issuance of this permit is unlikely to have any significant impact on soil quality, alteration of soil stability, or moisture content.

The two soil types in the project area are Williams loam and Vida clay loam. Williams loam is well drained with slopes of 0-4 percent. Vida clay loam is well drained with slopes of 1-4 percent. Neither soil type is characterized by salinity.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

*Determination*: Issuance of this permit is unlikely to have any significant impact on vegetative cover.

The proposed project may alter existing vegetative cover; however the project area has been developed as an agriculture field prior to this project and is no longer natural native vegetation. Management of noxious weeds will be the responsibility of the Applicant.

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

*Determination*: Issuance of this permit is unlikely to have any significant impact on air quality or have adverse effects on vegetation due to increased air pollutants.

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

*Determination*: Not applicable, project not located on State or Federal lands.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

*Determination*: No other potential impacts have been identified.

## HUMAN ENVIRONMENT

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

*Determination*: No known environmental plans or goals will be significantly impacted by this project.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

*Determination*: No access or recreational activities will be significantly impacted by this project.

**HUMAN HEALTH** - *Assess whether the proposed project impacts on human health.*

*Determination*: The project will have no significant impact on human health.

**PRIVATE PROPERTY** - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

**OTHER HUMAN ENVIRONMENTAL ISSUES** - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

*Impacts on:*

(a) *Cultural uniqueness and diversity?* No significant impacts identified

(b) *Local and state tax base and tax revenues?* No significant impacts identified

(c) *Existing land uses?* No significant impacts identified

(d) *Quantity and distribution of employment?* No significant impacts identified

(e) *Distribution and density of population and housing?* No significant impacts identified

(f) *Demands for government services?* No significant impacts identified

(g) *Industrial and commercial activity?* No significant impacts identified

(h) *Utilities?* No significant impacts identified

(i) *Transportation?* No significant impacts identified

(j) *Safety?* No significant impacts identified

(k) *Other appropriate social and economic circumstances?* No significant impacts identified

**2. *Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts No significant secondary impacts identified

Cumulative Impacts Cumulative impacts of pending or recently permitted rights impacting the Yellowstone River have been examined. The area of examination includes the Lower Yellowstone River from Glendive down to where the river enters North Dakota. The following table shows pending or recently permitted rights and the expected depletion (AF) to surface water on the Yellowstone River.

| WR Number | Name | GW or SW | Annual Depletion (AF) |
|---|---|---|---|
| 30062767 | Montana H2O | GW | 585 |
| 30064201 | Ames/Bell | SW | 645 |
| 30064191 | Thiel | GW | 23.2 |
| 30064941 | Wick | GW | 50 |
| 30065439 | Exploration Drilling | GW | 617.2 |
| 30066962 | Bradley | GW | 272 |
| 30066963 | CR 126 Water | GW | 322 |

| | | | |
|---|---|---|---|
| 30066151 | Main Street Water | GW | 367.8 |
| 30068052 | IAP Worldwide Services | GW | 66.9 |
| | | **Total Depletion** | 2949.1 |

Based on an annual depletion of 2949.1 AF, the average depletion from the Yellowstone River for pending or unperfected permits is 4.08 CFS. Since physical and legal availability of surface water can be shown for the Yellowstone River during all months of the year in excess of the combined depletion of 4.08 CFS for pending and unperfected permits, the Department finds the cumulative impacts of pending or unperfected permits will have no significant impact on the water of the Yellowstone River.

**3.** ***Describe any mitigation/stipulation measures:*** Not applicable

**4.** ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

The only other viable alternative would be the no action alternative in which the Department would not authorize a water right permit for Commercial use in a housing development. Under the no action alternative, the Applicant would not be able to provide a public water supply for the housing development, ultimately preventing the complete expansion of the housing development as designed.

## *PART III. Conclusion*

***1. Preferred Alternative***

Issue a water right permit if the applicant proves the criteria in 85.2.302, MCA is met.

***2 Comments and Responses***

**3.** ***Finding:***

*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:*

No significant impacts related to the proposed project have been identified.

*Name of person(s) responsible for preparation of EA:*

*Name:* Nathaniel T. Ward
*Title:* Water Resource Specialist
*Date*: March 19, 2014